

REMARKS

Claims 1-28 were examined in the Office Action mailed September 12, 2006.

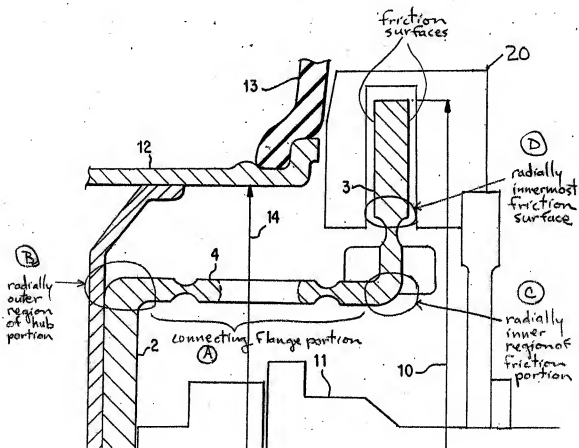
The Applicant notes with appreciation the withdrawal of the finality of the previously pending Office Action. The following objections and rejections are currently pending:

- Objection to the drawings for failing to illustrate the claim 1 limitation of “the friction portion radially inward from a radially innermost friction surface of the friction portion.”
- Rejection of claims 1-28 under 35 U.S.C. § 112, second paragraph, as indefinite on the ground that it is not clear which feature of the present invention is the “friction portion radially inward from a radially innermost friction surface portion.”
- Rejection of claims 1-28 under 35 U.S.C. § 103(a) as unpatentable over newly-cited U.S. Patent No. 3,958,671 to Muller (“Muller”) in view of U.S. Patent No. 5,222,568 to Higasa, *et al.* (“Higasa”).
- Rejection of claim 16 on the grounds of nonstatutory obviousness-type double patenting as unpatentable over claim 2 of U.S. Patent No. 7,255,205 to Plantan, *et al.* (“Plantan ‘205”)

1. **The Recited Feature Is Shown In The Drawings.** The Applicants respectfully traverse the objection to drawings for failing to illustrate the claim 1 limitation of “the friction portion radially inward from a radially innermost friction surface of the friction portion,” on the ground that this feature is illustrated in the drawings.

As shown in the annotated portion of Fig. 2 below, “the connecting flange portion [identified as “A” in the annotated drawing] connects a radially outer region of the hub portion [“B”] to a radially inner region of the friction portion [“C”]

radially inward from a radially inner-most friction surface ["D"] of said friction portion [the friction surfaces are identified below, within caliper 20]."



In view of the above, the Applicant submits that the recited feature is adequately illustrated in the figures, and no corrected drawing is required. Reconsideration and withdrawal of the drawing objection, and the associated § 112, second paragraph, rejection of claims 1-28, is respectfully requested.

2. The Claims Are Patentable Over The Cited References. The Applicant respectfully traverses the rejection of claim 1-28 under § 103(a) as unpatentable

over Muller in view of Higasa, on the ground these references do not teach or suggest all of the features of the present invention for which they are cited.

The Muller reference discloses a unique trailer brake, in which the braking action is not performed by application of brake pads in physical contact with a brake disc, but rather by circulating hydraulic fluid between two halves of a turbine unit, very similar to a torque converter in an automatic transmission. While the two turbine components are referred to as a "rotor" 20 and a "stator" 30, these labels correspond to common fluid energy transfer turbine components (*e.g.*, the turbine stator and rotor of an automatic transmission torque converter).

Thus, the Muller "rotor" 20 is not a brake rotor as this term is used in the present Application, *i.e.*, a brake disc with a hub and a friction portion to which brake pads are applied. MPEP § 2111 (claims to be interpreted in a manner "consistent with the specification"). Indeed, the cited Muller components have no "friction portion" or "friction surface" corresponding to that recited in the present claims. The element 21 cited in the September 12, 2007 Office Action is simply a sheet metal ring ("annular shell 21") which connects one half of the turbine (turbine rotor 20) to a flange of the hydraulic fluid reservoir 40 which rotates with the trailer wheel. The annular shell 21 does not have any "friction surface" or "friction portion" which is acted upon by a brake pad or any other friction material (the same can be said for turbine rotor 20, which simply redirects hydraulic fluid into the turbine blades of stator 30). Muller therefore does not suggest claim 1's "friction portion,

said friction portion formed as a generally planar ring," located "outboard of the wheel rim," which "has an outer radius greater than a greatest inner radius of the wheel rim."

As to the Higasa reference, this reference teaches locating an electric motor within a wheel, and placing the wheel's disk brake (disc 66, caliper 67), including the hub portion of the brake disc, on the *inboard* side of the vehicle's suspension member (strut/hub 55). There would be no motivation to combine the Higasa and Muller references, because no functional wheel arrangement would result from their combination.

The Muller hydrodynamic brake turbine is arranged to be located *outboard* of the wheel, in order to permit pneumatic control air to be admitted into reservoir 40 at the outside center of the axle via pipe 45 and header 46 to control brake action (the inboard Muller axle blocking any central air introduction path from the rear side of the wheel). Higasa teaches displacing the entire brake inboard of both the wheel and its supporting suspension, so that each wheel can receive an electric propulsion motor. Because the Higasa disc brake requires a fixed mounting location for its caliper (in Higasa Fig. 7, the caliper is affixed to strut 55), and there is no possibility of fixed mounting of a brake caliper outside the wheel envelope on the outboard side of the Muller wheel, the Higasa brake's friction disc cannot be selectively inserted into the Muller hydrodynamic turbine brake system with any expectation of success (there being nothing to apply a friction force to the Higasa

brake disk, and specifically no available fixed location outboard of the wheel to secure a brake caliper).¹

In view of the foregoing, the Applicant respectfully submits that Muller fails to teach or suggest all of the features of the present invention for which it is cited, and that no combination of the Muller and Higasa references would result in the invention recited in claim 1 and its dependent claims and therefore there would be no suggestion or motivation for the combination. Accordingly, reconsideration and withdrawal of the pending § 103(a) rejection of claims 1-28 is respectfully requested.

3. The Double-Patenting Rejection. The Applicant is submitting herewith a terminal disclaimer to overcome the rejection of pending claim 16 as unpatentable over claim 2 of the Plantan '205 reference. Accordingly, withdrawal of the double-patenting rejection is respectfully requested.

CONCLUSION

The Applicant respectfully submits that claims 1-28 are in condition for allowance. Early and favorable consideration, and issuance of a Notice of Allowance is respectfully requested.

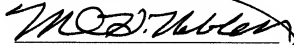
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

¹ The Applicant further notes as a separate matter that one of ordinary skill in the art would not have looked to the Muller turbine brake as a starting point for any disk brake development, *i.e.*, Muller, which contains no mechanical friction elements whatsoever, is not analogous art to the field of disk brakes.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #011351.52877US).

January 8, 2008

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Jeffrey D. Sanok", is written over a horizontal line.

Jeffrey D. Sanok
Registration No. 32,169
Mark H. Neblett
Registration No. 42,028

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844